

**REMARKS**

At the request of Examiner Karl Puttlitz, please enter the amendment of pages 55 and 56. The new pages show the catalyst row with no truncations of the headers. No new matter has been added.

The Examiner is requested to contact the undersigned if any issues arise with this amendment.

Respectfully submitted,  
BUCHANAN INGERSOLL & ROONEY PC

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**TABLE 18**  
Yields of the products obtained during the catalyst tests

	Yields - TTUc (%)																			
Catalyst	Calcination temp (°C)	Flow rate of air (ml/mn/gca)	Oven temperature (°C)	TG = total TTU	TG O <sub>2</sub> = total TTU	C balance	O balance	Acetaldehyde	Propanaldehyde	Acrolein	Allyl alcohol	Acrylic acid	Propionic acid	CO	CO <sub>2</sub>	Propane	CO+CO <sub>2</sub>	Acid per assay		
C33 280	0 400	412	16.5	35.0	98.4	02.1	0.0	0.0	0.0	0.0	0.0	1.9	0.1	5.3	2.6	1.9	4.6	81.9	4.5	8.3
C34 280	10.6 400	411	15.6	31.6	98.8	03.2	0.0	0.0	0.0	0.0	0.0	1.5	0.1	5.8	2.0	1.5	4.5	83.2	3.6	8.1
C35 290	0 400	412	16.5	34.5	99.3	03.0	0.0	0.0	0.0	0.0	0.0	1.7	0.1	5.7	2.4	1.8	4.6	82.7	4.2	8.3
C36 290	10.6 400	411	15.5	30.9	98.2	02.1	0.0	0.0	0.0	0.0	0.0	1.5	0.1	6.0	2.0	1.4	4.5	82.7	3.4	8.2
C37 300	0 400	410	14.4	28.1	99.6	98.1	0.0	0.0	0.1	0.0	0.0	1.2	0.1	5.5	1.7	1.3	4.5	85.2	2.9	7.9
C38 300	10 400	411	15.7	32.2	97.3	97.5	0.0	0.0	0.1	0.0	0.0	1.6	0.1	5.6	2.1	1.5	4.7	81.6	3.6	8.2
C39 300	20.1 400	413	16.7	34.4	98.1	01.6	0.0	0.0	0.0	0.0	0.0	1.6	0.1	6.7	2.1	1.6	4.5	81.4	3.7	9.2
C40 300	51.6 400	405	17.7	36.5	99.3	99.6	0.0	0.0	0.3	0.0	0.0	1.9	0.2	7.7	2.1	1.5	4.1	81.5	3.6	10.1
C41 320	0 400	414	23.5	48.7	99.5	03.1	0.0	0.0	0.2	0.0	0.0	2.1	0.1	12.8	2.4	1.7	4.2	76.0	4.2	15.5
C42 320	0 420	438	29.6	67.3	98.7	01.6	0.0	0.0	0.1	0.0	0.0	2.6	0.0	15.0	4.3	3.1	4.5	69.0	7.4	18.5
C43 320	10 400	414	21.6	44.2	100.0	02.5	0.0	0.0	0.2	0.0	0.0	1.8	0.1	11.3	2.3	1.7	4.3	78.4	3.9	13.8
C44 280	21.2 400	413	20.5	45.6	99.5	01.8	0.0	0.0	0.2	0.0	0.0	2.0	0.1	9.5	2.5	1.9	4.3	79.1	4.4	12.9
C45 290	19.1 400	414	16.9	35.7	96.3	95.8	0.0	0.0	0.0	0.0	0.0	1.6	0.1	7.2	2.1	1.6	4.2	79.4	3.7	9.7
C46 320	19.2 400	413	18.1	39.4	99.2	95.7	0.0	0.0	0.0	0.0	0.0	1.7	0.0	8.8	2.1	1.5	3.9	81.2	3.6	11.2
C47 280	49.2 400	415	18.3	39.8	01.1	99.9	0.0	0.0	0.1	0.0	0.0	1.6	0.1	8.6	2.2	1.6	4.2	82.8	3.8	11.0
C48 290	52.9 400	414	20.9	46.7	99.1	01.8	0.0	0.0	0.1	0.0	0.0	2.0	0.1	10.1	2.5	1.9	4.2	78.2	4.4	12.9
C49 320	51.6 400	412	16.1	36.2	98.0	99.1	0.0	0.0	0.0	0.0	0.0	1.8	0.0	6.4	2.3	1.6	3.8	81.9	3.9	9.0

TABLE 19  
Selectivities of the products obtained in the catalyst tests

Catalyst	Calcination temp (°C)	Flow rate of air (ml/min/gca)	Oven temperature (°C)	Hot temp. (°C)	TGA = total TTU	TGA = total TTU	C balance	O balance	Propenaldehyde	Acetone	Acrolein	Allyl alcohol	Allyl acrylate	Acrylic acid	CO	CO <sub>2</sub>	Propene			
C33	280	0	400	412	16.5	35.0	98.4	102.1	0.0	0.0	0.7	0.1	0.0	0.0	11.5	0.3	32.2	15.7	11.6	27.8
C34	280	10.6	400	411	15.6	31.6	98.8	103.2	0.1	0.0	0.9	0.1	0.0	0.0	9.7	0.3	37.2	13.1	9.8	28.8
C35	290	0	400	412	16.5	34.5	99.3	103.0	0.1	0.0	0.7	0.1	0.0	0.0	10.5	0.3	34.8	14.6	11.0	27.9
C36	290	10.6	400	411	15.5	30.9	98.2	102.1	0.0	0.0	0.9	0.1	0.0	0.0	9.6	0.3	38.6	12.8	8.9	28.9
C37	300	0	400	410	14.4	28.1	99.6	98.1	0.0	0.0	0.8	0.4	0.0	0.0	8.5	0.7	38.0	11.7	8.7	31.1
C38	300	10	400	411	15.7	32.2	97.3	97.5	0.0	0.0	0.9	0.2	0.0	0.0	10.3	0.4	35.4	13.4	9.8	29.7
C39	300	20.1	400	413	16.7	34.4	98.1	101.6	0.0	0.0	0.9	0.1	0.0	0.0	9.7	0.4	39.9	12.6	9.3	27.0
C40	300	51.6	400	405	17.7	36.5	99.3	99.6	0.0	0.0	1.6	0.0	0.0	0.0	10.7	1.0	43.2	11.6	8.5	23.4
C41	320	0	400	414	23.5	48.7	99.5	103.1	0.0	0.0	0.8	0.1	0.0	0.0	8.8	0.3	54.5	10.4	7.3	17.9
C42	320	0	420	438	29.6	67.3	98.7	101.6	0.0	0.0	0.4	0.1	0.0	0.0	8.7	0.1	50.6	14.5	10.6	15.1
C43	320	10	400	414	21.6	44.2	100.0	102.5	0.0	0.0	0.7	0.1	0.0	0.0	8.5	0.3	52.3	10.5	7.7	20.0
C44	280	21.2	400	413	20.5	45.6	99.5	101.8	0.0	0.0	0.8	0.1	0.0	0.0	9.7	0.3	46.6	12.4	9.2	20.9
C45	290	19.1	400	414	16.9	35.7	96.3	95.8	0.1	0.0	0.2	0.1	0.0	0.0	9.7	0.3	42.8	12.5	9.6	24.7